

Special Needs Growth Charts

WIC staff are encouraged to review the online module entitled "The CDC Growth Charts for Children with Special Health Care Needs." The CDC module was revised by the University of Washington in 2009 to make it more interactive.

The online training provides information on how to take and plot segmental measurements. Alternative condition growth charts are discussed including issues and limitations of the charts. CDC recommends use of the standard CDC regular growth charts for all children. However, healthcare providers often use the condition specific growth charts such as those listed in this document as a means of comparison. <http://depts.washington.edu/growth/cshcn/text/intro.htm>

General Resource:

University of Washington Pediatric Nutrition Consultation On line. Assuring Pediatric nutrition in the community - frequently used guidelines. June 2004. Internet retrieved August 15, 2009.

<http://depts.washington.edu/nutrpeds/fug/growth/specialty.htm>

Description: Site provides links to discussion on special growth charts for children: Preterm infants, Down syndrome, cerebral palsy, Turner syndrome, achondroplasia, Williams syndrome, Prader Willi syndrome and Noonan syndrome. This document uses a question-answer format and lists published information on the charts.

Achondroplasia

Growth Chart:

Little People of America (LPA). LPA is a nonprofit organization that provides support and information to people of short stature and their families. Look for medical information and growth charts. Internet retrieved August 15, 2009.

<http://web.memberclicks.com/mc/page.do?sitePageId=73541&orgId=lpamrs>

Description: Lists growth charts by sex, height, weight, head circumference, weight for height and by special condition of achondroplasia

References:

Hoover-Fong JE, McGready J, Schulze KJ, Barnes H, Scott CI. Weight age for age charts for children with achondroplasia. *Am Journal of Med Genetics* 2007: Part A 143A:2227-2235. Internet retrieved August 14, 2009.

www.biostat.jhsph.edu/~jmcgread/weight_for_age_achon.pdf

Horton WA, Rotter JI, Rimo DL, Scott CI, Hall JG. Standard growth curves for achondroplasia. *J Pediatr* 1978;93:435-8. Abstract at

<http://www.ncbi.nlm.nih.gov/sites/entrez>. Add number 690757 in the search menu.

Description: Standard curves to assess normal growth in individuals with achondroplasia, to aid in the determination of superimposed disorders, and to assess any growth accelerating therapy.

Cerebral Palsy-Quadriplegic

Growth Charts:

Kennedy Krieger Institute

http://www.kennedykrieger.org/kki_misc.jsp?pid=2694&bl=1mera

Description: Online charts or Institute will send camera ready charts upon request

Brachmann-de Lange Syndrome

Growth Charts: See Cornelia de Lange Syndrome.

Cornelia de Lange Syndrome

Growth Charts:

<http://www.cdlsusa.org/growthcharts.shtml> Cited August 14, 2009

[Height for Males, birth to 36 months](#)

[Height for Females, birth to 36 months](#)

[Weight for Males, birth to 36 months](#)

[Weight for Females, birth to 36 months](#)

[Height for Males, 2 to 18 years](#)

[Height for Females, 2 to 18 years](#)

[Weight for Males, 2 to 18 years](#)

[Weight for Females, 2 to 18 years](#)

[Head circumference for Males, birth to 18 years](#)

[Head circumference for Females, birth to 18 years](#)

Reference:

Cornelia de Lange Syndrome Foundation [homepage on the Internet is listed under CdLS-USA Foundation, Inc.] Internet retrieved August 14, 2009. www.cdlsusa.org

Description: Official website of the Cd-LS USA Foundation that contains research, information and resources, as well as information about the foundation.

Down Syndrome

Growth Charts:

Growth Charts for Children with Down Syndrome. Updated Jan 19, 2000. Internet retrieved August 14, 2009. <http://www.growthcharts.com/charts/DS/charts.htm>

Description: Growth charts for children with Down syndrome, including interpretation instructions and methods for using the chart.

Kids Growth.Com

<http://www.kidsgrowth.com/resources/articledetail.cfm?id=304>

References:

Cronk C, Crocker AC, Pueschel SM, et al. Growth charts for children with Down syndrome: one month to 18 years of age. *Pediatrics* 1988; 81:102-10. Abstract

available at <http://www.ncbi.nlm.nih.gov/entrez>. Add number 2962062 in the search for menu.

Description: Centile charts for assessment of stature and weight for two age intervals, 1 to 36 months and 2 to 18 years reflecting expected deficient size and growth rate of home-reared children with Down syndrome, based on 4650 observations on 730 children.

Myrelid A, Gustafsson J, Ollars B, Anneren G. Growth charts for Down's syndrome from birth to 18 years of age. *Arch Dis Child* 2002 Aug;87(2):97-103. Abstract available at <http://www.ncbi.nlm.nih.gov/entrez>. Add number 12138052 in the search for menu.

Description: Growth charts for Down's syndrome from birth to 18 years of age

Marfan Syndrome

Growth Charts:

Erkula G, Jones KB, Sponseller PD, Dietz HC, Pyeritz RE. Growth and maturation in Marfan Syndrome. *Am J Med Genetics* 2002;109:100-114. Abstract available at <http://www.ncbi.nlm.nih.gov/entrez>. Add number 11977157 in the search for section.

Description: Growth charts for persons with Marfan syndrome

Prader-Willi Syndrome

Growth Charts:

Holm VA. Growth charts for Prader-Willi syndrome. In: Greenswag LR and Alexander RC, editors. *Management of Prader-Willi Syndrome*, 2nd ed. New York: Springer-Verlag; 1995. Appendix B.

Description: Growth charts for Prader-Willi syndrome

Butler MG, Meaney FJ (1991a), Standards for selected anthropometric measurements in Prader-Willi syndrome. *Pediatrics* 88:853-860.

University of Washington Pediatric Nutrition Consultation On line. Assuring pediatric nutrition in the community - frequently used guidelines. June 2004. Internet retrieved August 15, 2009.

<http://depts.washington.edu/nutrpeds/fug/growth/specialty.htm>

Premature Infants

Growth Charts:

KidsGrowth.com <http://www.kidsgrowth.com/resources/article/detail.cfm?id=304>

Description: Internet site contains growth charts and developmental information.

Rubinstein-Taybi Syndrome

Growth Charts:

Height and Weight charts for children with Rubinstein-Taybi Syndrome. Prader-Willi Syndrome Association (USA). Retrieved August 15, 2009. Available from <http://www.rubinstein-taybi.org/html/medical.html>.

Description: Height and weight charts for children with Rubinstein-Taybi Syndrome

Stevens CA, et al. Growth in the Rubinstein-Taybi Syndrome. *Am J Med Genet* 1990;Supp 6:51-55. Abstract available at <http://www.ncbi.nlm.nih.gov/entrez>. Add number 2118779 in the search for section.

Description: Growth in the Rubenstein-Taybi Syndrome

Turner Syndrome

Growth Charts:

Frias JL, Davenport ML. Health Supervision for Children with Turner Syndrome. *Pediatrics* 111(3):692-702, March 2003.

<http://pediatrics.aappublications.org/cgi/content/full/111/3/692>. Retrieved August 15, 2009.

Description: Article describes genetic, clinical characteristics and growth chart.

KidsGrowth.Com <http://www.kidsgrowth.com/resources/articledetail.cfm?id=304>

Description: Site contains growth charts and developmental information.

References:

National Human Genome Research Institute. Learning About Turner Syndrome. <http://www.genome.gov/19519119>. Retrieved August 15, 2009.

Description: Good description of Turner Syndrome and links to additional references

The Turner Syndrome Society. Turner Syndrome Society of the United States. Retrieved August 15, 2009. Available from www.turner-syndrome-us.org

Description: Official website of the Turner Syndrome Society

Williams Syndrome

Growth Charts:

Williams Syndrome Growth Charts. Williams Syndrome Association. Retrieved August 17, 2009. <http://www.williamsyndrome.org/fordoctors/growthcharts.html>

Description: Official site of the Williams Syndrome Association, containing the latest information on Williams Syndrome

Reference:

Morris CA, Demsey SA, Leonard CO, Dilts C, Blackburn BL. Natural history of Williams syndrome: physical characteristics. *J Pediatr* 1988;113:318-26. Abstract

at <http://www.ncbi.nlm.nih.gov/entrez>. Add number 2456379 in the search for section.

Description: Investigation of the history of the Williams syndrome, including medical complications, growth patterns, and problems in adulthood.